



Route 37 Corridor Safety Sweep Project

- ◇ Accelerates a key component of “RhodeWorks,” Rhode Island’s comprehensive plan to achieve 90% structural sufficiency for its bridges by 2025.
- ◇ Multiple 50-year-old bridges are in dire need of reconstruction or rehabilitation to efficiently handle today's travel demands
- ◇ Yields immediate improvements to mobility and safety
- ◇ Benefits to a substantial portion of the traveling public clearly justify the investment

RIDOT TIGER FY2017 Discretionary Grant Application

October 16, 2017
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REHABILITATING ROUTE 37 CORRIDOR

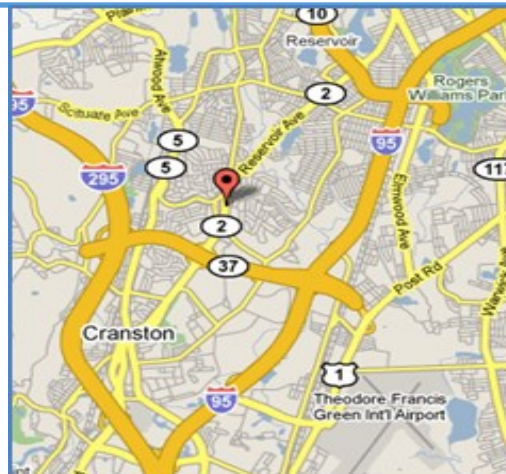
Building Safe and Dependable Bridges to Keep Rhode Island Connected

Dear TIGER Evaluation Team:

Rhode Island, the second most densely populated state in the nation and a critical link in the huge movement of people and goods throughout the Northeast corridor, ranks **last** in the nation in overall bridge condition. That's why, in 2016, Governor Gina M. Raimondo signed into law the "RhodeWorks" plan to repair more than 150 structurally deficient bridges and to prevent more from becoming deficient, and more costly to repair. RhodeWorks is projected to save close to \$1 billion over a decade by fixing bridges sooner.

The asset management program directed in RhodeWorks now dictates Rhode Island's State Transportation Improvement Plan, which is focused on implementing the bridge improvements identified in order to yield a structural sufficiency rate of 90% of the state's 1,173 bridges. Through this steady approach, the Rhode Island Department of Transportation (RIDOT) is making methodical improvements towards its goals, improving the sufficiency rate by more than 2% between October 2016 and June 2017 alone.

And, RIDOT is now poised to deliver projects efficiently and effectively by deploying a project management approach and leveraging a range of innovative procurement techniques such as design—build contracting and bundling of multiple proximate projects under a single contract to accelerate delivery. Notably, Federal Fiscal Year 2017 (FFY17) was RIDOT's most successful year, in terms of advertising project work, surpassing even the year of passage of the American Recovery and Investment Act (ARRA) in 2009. Compared to that year's total of \$268 million in advertised projects, 2017 closed on October 1 with total annual construction value advertised at \$293 million (compared with \$169 million in FFY 2016 and \$111 million in FFY 2015.)



Project Summary

- Project is eligible for TIGER funds, RT 37 is a vital corridor for Rhode Island
- Local matching funds have been allocated
- Project is listed in the State TIP
- Favorable benefit-cost ratio (BCA = 2.61 and return on investment 10%)
- Addresses existing structural deficiencies
- Improves safety and mobility
- Ensures continued economic growth

Application Overview

The following application responds to notices published in the Federal Register. We have carefully read and complied with the application requirements and are prepared to meet the expectation for future accounting, reporting and certification. Supporting documentation has been posted to a dedicated website located at <http://route37tiger.com>.

At an unprecedented pace, RIDOT is accelerating the repair of the state's infrastructure, getting projects out the door and shovels in the ground, and improving safety and economic growth even beyond what was envisioned by the enabling legislation.

With additional resources, RIDOT could measurably accelerate strategic components of the state-of-good-repair work envisioned in RhodeWorks—which received an award from AASHTO in 2017 for “Best Use of Technology & Innovation, Large Projects.” To that end, RIDOT is applying for TIGER funding to accelerate and streamline repairs along State Route 37 in a corridor-wide “safety sweep” that will yield important safety and economic benefits across Rhode Island.

State Route 37 is a compact, but **critical** east-west route in southern Cranston providing essential access to major population centers, interstate highways, and Rhode Island's international airport. Connecting the second- and third-largest cities in Rhode Island (Cranston and Warwick), **Route 37** is an essential link between I-295 and I-95, the two major interstate highways that pass through the heart of Rhode Island. It also connects to the interstate Post Road (US Route 1), and provides critical access to T. F. Green Airport, a growing international airport serving more than 3.6 million in-state and out-of-state passengers a year that is expanding to include flights from as Norwegian Air, Allegiant Air, and Frontier. With an **daily traffic count of 42,000 vehicles per day including 2,100 trucks**, Route 37 is one of the state's busiest corridors. State Route 37 is also a major hurricane evacuation route.

Built in the 1960s, this freeway's 24 bridges are now crumbling under increasing vehicle volumes and freight demands, **45 percent** of these bridges are classified as being in **poor condition**.

Interstate commerce is dependent upon this travel corridor, and the cities of Warwick and Cranston are well-positioned to be leaders in supply chain management and logistics for the region. Dean, UPS, and Fed EX have all established a presence in the region, and the Dallas, Texas-based Pinnacle Logistics recently announced that it will be **hiring 300 workers at T. F. Green**. These companies and many more depend upon Route 37 to facilitate the flow of goods, and it is incumbent upon RIDOT to ensure that it is well-maintained, and improve transit connections to roads, bridges, air, and rail.

In addition to the urgent bridge condition improvements along Route 37, there is a critical need to make safety improvements to the Exit 3 off-ramp, which can no longer handle the current volumes of traffic exiting Route 37 on to **Pontiac Avenue**. The daily congestion delays and crashes attributable to this exit ramp have become an **economic impediment to continued growth** for this part of Rhode Island. To address this safety and operational issue, the Exit 3 off-ramp will be **expanded**, and multiple intersections at Pontiac Avenue will be redesigned to meet daily traffic needs.


RIDOT is requesting \$25 million in TIGER grant assistance to replace and/or rehabilitate a series of 15 bridges and culverts located along the eastern portion of Route 37 and make safety modifications to its westbound Exit 3 off-ramp at Pontiac Avenue.

This project will address structural issues in multiple bridges, detailed in this application and its appendices, resulting in fewer future repairs, reductions in maintenance costs, traffic improvements, and safety enhancements. The total project cost is **\$44.06 million**. The balance will be covered through a combination of the funding from the State's federal formula allocations (\$10.3 million) and a twenty percent (20%) non-federal match (\$8.8 million). The \$25 million TIGER grant will enable RIDOT to begin this project sooner, to achieve greater economy-of-scale in construction, and to construct safety and efficiency improvements to the Exit 3 off-ramp that would not be possible with current funding levels. With this funding in place, **construction could begin in 2019** and be completed by 2021.

In addition, accelerating the funding for this group of bridge and roadway repairs will achieve **better economies of scale** in procurement of the contract, environmental permitting and project delivery. This project is also consistent with the TIGER program's encouragement of state of good repair improvements aligned with efficient consideration of asset management. Our **asset-management approach** to infrastructure has shown that letting bridges deteriorate leads to much more costly rehabilitation and reconstruction. By fixing these much-used spans before they are structurally deficient, and then maintaining them on a strict schedule, we reduce overall life-cycle costs.

If left unimproved, the deterioration of Route 37 will threaten the future transportation network efficiency, mobility of goods, public safety, and future economic development in Rhode Island and beyond.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter Alviti Jr.", is positioned above the printed name.

Peter Alviti Jr.

Director, Rhode Island Department of Transportation

Evaluation Criteria and Readiness Summary

Primary Selection Criteria Significant Long Term Benefits

State of Good Repair	This project replaces or repairs rapidly deteriorating critical assets that continuously require costly emergency repairs. The result will be long-term structural and operational improvements, cost savings, and mark the first step towards a long-term strategy of effective asset management for the critical Rt. 37 corridor. As described above, the project would accelerate an important component of “RhodeWorks,” the state’s asset-management driven strategy to achieve 90% bridge structural sufficiency by 2025.
Economic Competitiveness	Route 37 is an important connection point to the State’s growing international airport as well as to multiple logistics companies that provide access to goods and services throughout the region. Given these assets as well as other travel and commuting needs throughout the state, substantial economic benefits are achieved by improving—and avoiding future decay— of this route.
Environmental Sustainability	Traffic improvements will result in a decreased congestion levels, which will lower vehicle emissions. The corridor is also an important hurricane evacuation route.
Quality of Life	Enhanced accessibility to a critical corridor will ensure regional connectivity is maintained for employment, commercial, governmental, and transportation facilities throughout the state. Improved access to T.F. Green International Airport will improve travel options for Rhode Island residents, visitors, and passengers from across New England. The project will yield considerable time savings for travelers, estimated to be valued at nearly \$10 million a year.
Safety	Structural improvements to bridges will improve public safety by guaranteeing the long-term structural integrity of the route as a whole. In addition, exit ramp improvements will reduce the number of vehicle crashes, saving lives, preventing injuries and reducing congestion and accident-induced delays.

Secondary Selection Criteria

Innovation	Integration of the RIDOT Transportation Management Center’s advanced construction methods (accelerated bridge construction techniques), and incorporation of our new Transportation Asset Management program make this an innovative, forward-looking project. Without TIGER funding, an additional \$5.2 million in rehabilitation and maintenance costs is estimated.
Partnership	RIDOT has letters of support from state and local and private stakeholders. Includes Public-Private-Partnership funding. The list is provided both on http://route37tiger.com and later in this document.

Evaluation Criteria and Readiness Summary

Demonstrated Project Readiness

Technical Feasibility	Preliminary engineering has already begun, and pre-construction engineering will be complete late 2018 in preparation for construction beginning in early 2019.
Financial Feasibility	The project is already listed in the Rhode Island TIP, state matching funds have been allocated and accounted for.
Project Schedule	The project is anticipated to begin October 1, 2019 and be completed August 1, 2021.
Assessment of Project Risks and Mitigation Strategies	RIDOT is committed to evaluating, mitigating, and eliminating risks. RIDOT will ensure erosion control and construction surveys will be employed, will evaluate the affect on fish runs and Accelerated Bridge Construction techniques will be considered to minimize the amount of time taken to replace the major bridge structures, weekend and night construction will be required to minimize travel delays. Stormwater treatments will be applied.
Environmental Review and Approvals	RIDOT has initiated the process of securing a NEPA categorical exclusion certification permit from Federal Highway.

Benefit-Cost Assessment

Favorable 2.61 benefit-cost ratio and 10 percent return on investment

I. Project Description

Route 37, also known as the Lincoln Avenue Freeway, is a major east-west corridor, which is part of the National Highway System traversing the cities of Cranston and Warwick and the state by linking T. F. Green Airport with I-95 and I-295. As a result, this four-lane freeway is a vital and critical component of the State's transportation network and an important asset in driving the State's economy. Therefore, the purpose of the Route 37 Corridor Safety Sweep Project is to improve the state of good repair of this important transportation asset to extend its service life and address the safety and traffic congestion problems by reducing traffic bottlenecks on Route 37.

The bridges along Route 37 were constructed between 1963 and 1966, and were rehabilitated in 1989. Today, many of these structures are in dire need of either replacement, or extensive rehabilitation and a number would benefit from preservation work. In addition, today's high level of traffic requires additional bottleneck improvements detailed in Part V. This project involves the improvement of fifteen (15) of these bridges located along a 1.6-mile section on the eastern end of the freeway. The bridges included in this project are listed below in Table 1. Their current conditions are discussed in Part V, Article ii. of this document.

- ◇ **Bridge replacement** — Replacement of four bridges (#062701, #062901, and 063501) which are rated in poor condition. The span of the Bridge #062601 will be lengthened to enable construction of a two-lane road beneath this bridge.
- ◇ **Bridge Rehabilitation** — Major rehabilitation work on two structures (#062801 and #126401), which are in advanced disrepair, rated in poor condition and require major rehabilitation.
- ◇ **Bridge Preservation** — Preservation improvements for nine bridges and culverts (#063001, #063101, #063201, #063301, #063401, #063601, #063701, and #126301) all rated in fair condition.

Table 1: Route 37 Bridges identified for reconstruction, rehabilitation or preservation improvements

Bridge #	Bridge Name	Type of Improvement	Feature Intersected	Deck Area	Length (ft.)	Age	Sufficiency Rating
063501	Jefferson Blvd North Bridge at RI 37 WB	Replacement	JEFFERSON BLVD	7,427.10	134.8	51	26.0
062701	Pontiac Ave Bridge, RI 37 EB & WB at Pontiac Ave	Replacement	PONTIAC AV	11,872.59	126.0	52	32.6
062901	Pawtuxet River North Bridge at RI 37WB and Pawtuxet River	Replacement	PAWTUXET RIVER	9,563.00	212.5	54	49.0
062801	Pawtuxet River South, RI 37 EB at Pawtuxet River	Major Rehabilitation	PAWTUXET RIVER	11,691.00	259.8	54	22.7
126401	Pontiac Ave RI 37 Culvert No.126401	Major Rehabilitation	UNNAMED BROOK	2,448.00	8.0	52	43.0
063301	Lincoln Park North, RI 37 WB at I-95 NB & SB	Bridge Preservation	I-95 NB & SB	11,129.88	248.0	51	51.6
063801	Boston Post Road Bridge at RI 37 EB & WB	Bridge Preservation	US 1 POST RD	17146.91	182.09	52	59.5
063101	Lincoln Park Ramp North, RI 37 WB at Ramp B	Bridge Preservation	RAMP B	3,315.28	67.9	51	63.7
063601	Hillsgrove RR South Bridge at RI 37 EB	Bridge Preservation	AMTRAK	8320.5	150.92	54	67.0
063701	Hillsgrove RR North Bridge at RI 37 WB	Bridge Preservation	AMTRAK	8664.95	157.15	54	67.9
063401	Jefferson Blvd South Bridge, RI 37 EB	Bridge Preservation	JEFFERSON BLVD	7,362.52	128.9	51	71.4
063201	Lincoln Park South Bridge, RI 37 EB at I-95 NB & SB	Bridge Preservation	I-95 NB & SB	16,996.22	251.9	53	71.7
063001	Lincoln Park Ramp South, RI 37 EB at Ramp A	Bridge Preservation	RAMP A	2,743.00	61.0	51	74.0
126301	Pontiac Ave RI 37 Culvert No. 126301	Bridge Preservation	UNNAMED BROOK	432.00	8.0	52	83.0
				122,105.32	2,022.95	52.27	

II. Project Location

The Route 37 Bridge Reconstruction project is located in the geographical center of Rhode Island. Nine of the bridge structures included in this project are located within the City of Warwick, RI's second largest city with an estimated population of 81,579 while the remaining six bridges are located in the City of Cranston, the third largest city with an estimated population of 81,034.¹ The estimated population density within a 2 mile radius of this project is 2,561 per square mile. This location is within the Providence, RI-MA Urbanized Area, as defined in the 2010 Census.

Route 37 begins at Natick Avenue in Cranston, and extends eastward for approximately four miles ending at U.S. State Route 1 in Warwick, which connects travelers from I-295 and I-95 to the MBTA Commuter Station and T.F. Green Airport which completed its runway expansion in October, 2017 to accommodate larger planes and additional non-stop flights. Passenger growth is anticipated now that the airport is more marketable, safer and better prepared for the airplanes of the future.

Route 37 also connects commuters from I-291, I-95, and State Route 2 to Pontiac Avenue, a minor arterial roadway where the State of Rhode Island's John O. Pastore Center is located. This large 300-acre complex of over 100 state-managed institutions and facilities includes the Department of Behavioral Healthcare, Developmental Disabilities and Hospitals (BHDDH), Department of Labor and Training (DLT), Department of Corrections (DOC), and the Division of Motor Vehicles (DMV). Over 2,300 state workers commute to this complex by car each day, and thousands of visitors obtain services from these offices.

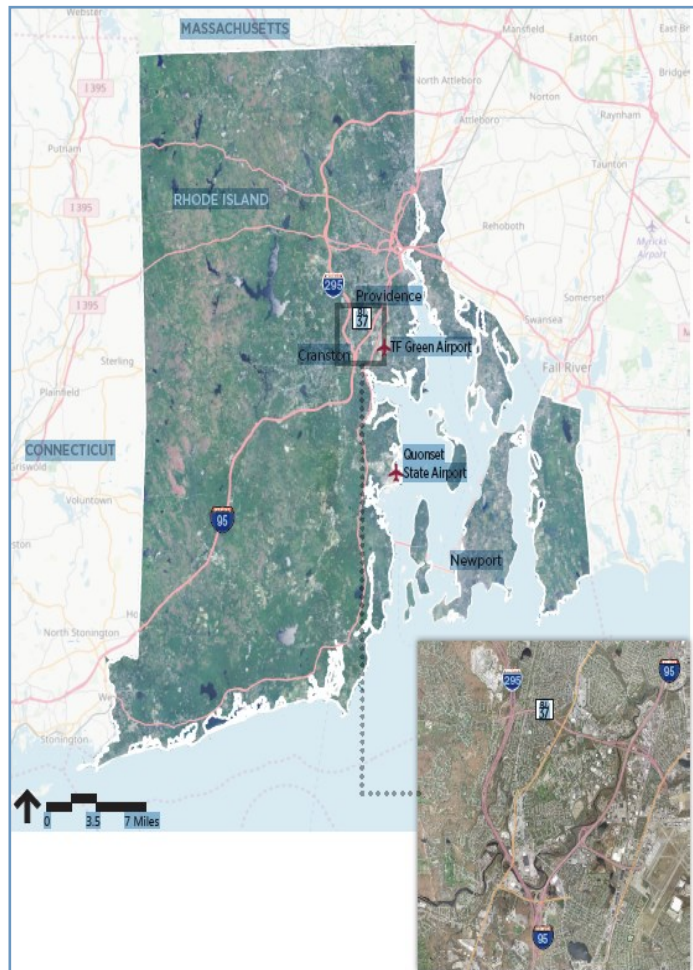


Figure 1: Route 37 is located in the heart of Rhode Is-

¹ US Census, Incorporated Places and Minor Civil Divisions Datasets: Sub-county Resident Population Estimates: April 1, 2010 to July 1, 2016

Located near to Route 37 is Garden City Center. Home to 500,000 square feet of retail and office space including sixty retail stores, nine restaurants, and twenty-six offices, Garden City Center is undergoing further expansion and plans add ten additional businesses during 2018.

The Chapel View center, which also borders Route 37, is another expanding mixed-use property with forty-five different types of commercial business including retail stores, office spaces, restaurants, and condominiums. Surrounding this growing retail and commercial area are industrial facilities and residential areas, illustrated in Figure 2.

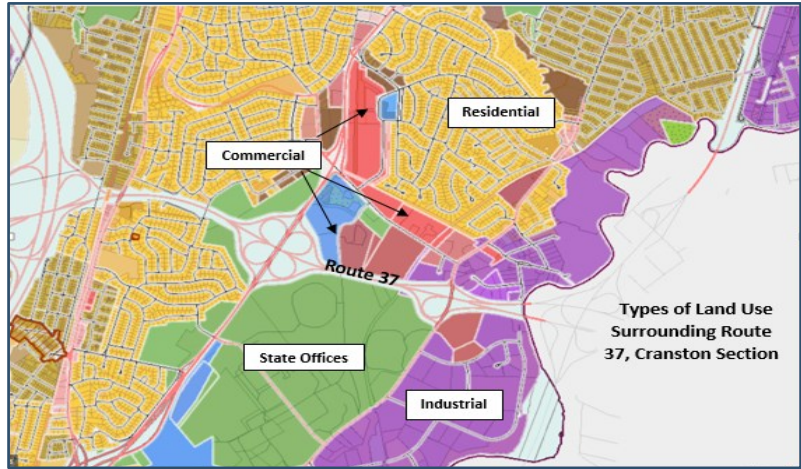
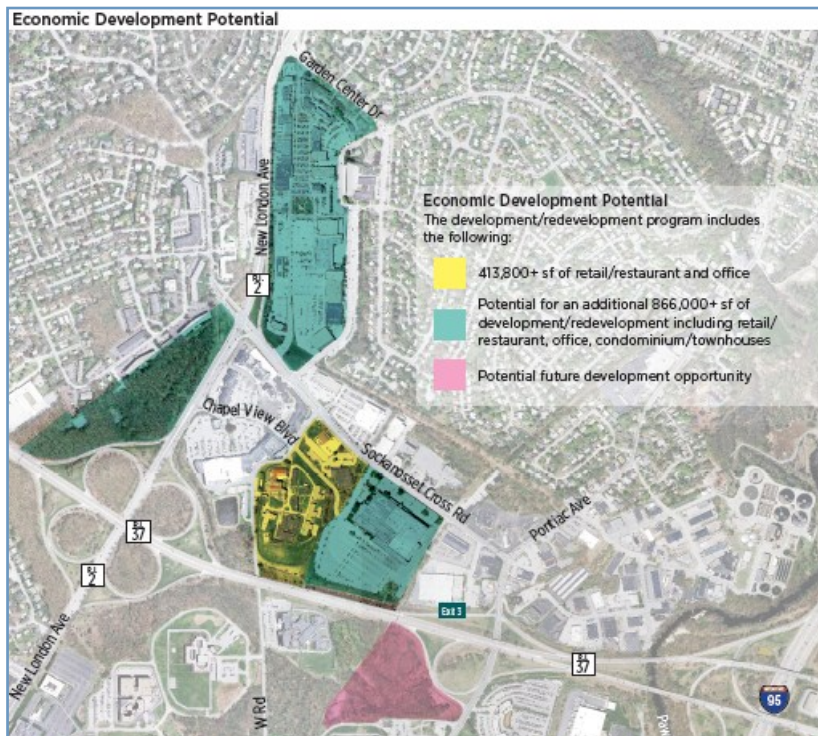


Figure 2: Types of land use surrounding Route 37 Cranston

Several parcels just to the west and northwest of Route 37 are now being considered for redevelopment. There are both near-term and long-term development projects being planned for this portion of the Route 37 corridor as shown in Figure 3. These projects are expected to result in an additional 490,000 square feet of mixed-use development, and 463 new employees commuting to work within this area each day.



As noted earlier, Route 37 links to US Route 1 in Warwick which is another densely populated area with residential, commercial, industrial and transportation centers as shown in Figure 4 on next page.

Figure 3

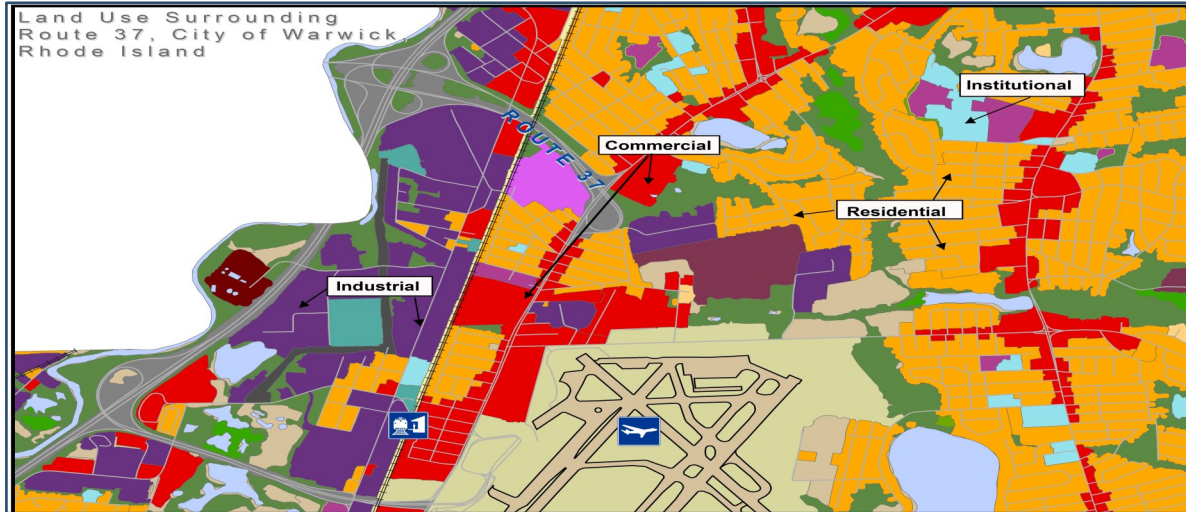


Figure 4: Types of land use surrounding Route 37 Warwick area.

III. Project Parties

The primary project parties are the State of Rhode Island and RIDOT. Secondary, but critical to the project, is Carpionato Group, LLC, a private real-estate developer that has pledged \$2 million toward road construction. Both entities are familiar with and have experience in federal grant processes. RIDOT has been commended by FHWA for quality reporting and documentation on previous federal grants.

The State of Rhode Island www.ri.gov

The State of Rhode Island is the official grant recipient.

Rhode Island Department of Transportation www.dot.ri.gov

RIDOT will be responsible for administering the grant funds, managing the project, performing maintenance on the completed bridges and roads, and ensuring the execution of a effective long-term plan asset management plan.

Key Stakeholders

- **The City of Warwick, Rhode Island** <https://www.warwickri.gov/>

The City of Warwick contains nine of the bridges slated for replacement in this project. Warwick has expressed its support for the completion of the project.

- **The City of Cranston, Rhode Island** <http://www.cranstonri.com/>

The City of Cranston contains six of the bridges slated for replacement, as well as two major shopping centers and T.F. Green International Airport. Like Warwick, Cranston has expressed its support for the project.

- **Carpionato Group LLC, Cranston, Rhode Island**

Carpionato Group is a real-estate service provider that includes leasing and acquisitions, brokerage and tenant representation with a portfolio of commercial, residential and mixed-use property developments that include the Chapel View mix-use complex in Cranston.

IV. Grant Funds and Sources/Use of Funds

The future costs of the Route 37 Corridor Safety Sweep Project for which TIGER funds are sought are eligible costs as defined under Section C.3.i (Eligible Projects) of the FY 2017 TIGER Notice of Funding Opportunity (NOFO). For each year of the project, the chart below describes the amount of TIGER funding requested, sources and uses of all project funds, and total project costs. The percentage of project costs that would be paid for with TIGER Discretionary Grant funds, is approximately 56.74 percent of the total project cost.

Table 2: Route 37 Anticipated project schedule, cost and funding sources

Route 37 Corridor Safety Sweep Project					
Anticipated Project Schedule and Cost					
Preliminary Engineering, (including NEPA and other necessary approvals)	◇				
Pre-construction Engineering, Late 2018		◇			
Authorization of Funding, October 1, 2018		◇			
Contract Advertisement, November 15, 2018		◇			
Construction Contract Award, January 1, 2019			◇		
Construction Notice to Proceed, May 1, 2019			◇		
Construction Phase			◇	◇	
Construction Completion, October 1, 2021				◇	
Project Funding (\$ million)					
FY 2017 TIGER Grant Funds	6.30	6.30	6.30	6.30	25.000
RIDOT Formula Federal Funds (80/20)	2.50	2.50	2.60	2.60	10.200
RIDOT State Matching Funds (20%)	1.75	1.71	1.70	1.70	6.860
Sub Total RIDOT Funds	4.25	4.21	4.30	4.30	17.060
Private Matching Funds	1.00	1.00	0.00	0.00	2.000
Grant Total Funding	10.55	10.51	10.60	10.60	44.060

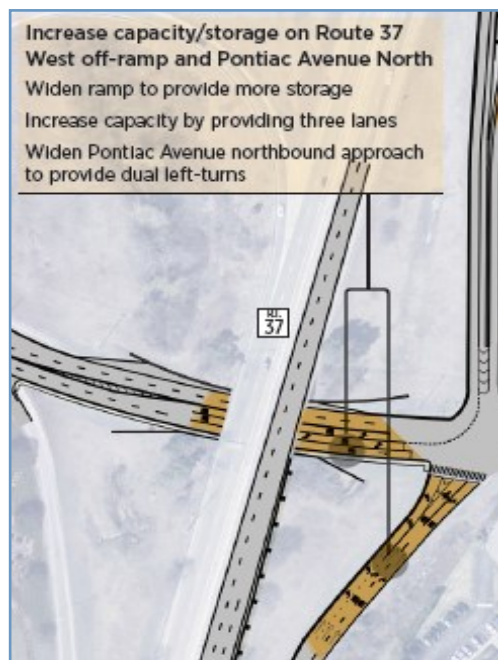
With the passage of the RhodeWorks legislation in 2016, RIDOT's 10-Year Plan (the foundation of the STIP) is funded over a decade, placing the Department in a sound financial position. Developed using an asset management approach, implementation of the 10-Year Plan will enable RIDOT to bring bridge conditions within the state to the federal minimum standard by 2025, while maintaining pavement condition and expanding maintenance. Beginning in FFY2017, the STIP includes significant state funding programmed for bridge rehabilitation and replacement. RIDOT would dedicate \$6.9 million of state funding revenues received from vehicle registration, surcharges and other dedicated vehicle user fees, along with gas tax and diesel tax revenues. With the passage of State Budget Article 21, these fees are dedicated to RIDOT via formula and restricted to use on transportation infrastructure projects. None of these accelerations are possible without additional funds, ultimately driving up costs.

V. Merit Criteria

a. Primary Selection Criteria

a.i. Safety

This project includes several roadway improvements which will improve on safety and travel time along the Route 37 corridor. First, the Route 37 westbound **Exit 3 (Pontiac Avenue) off-ramp will be widened from two to three-lanes**. This exit ramp is situated very close to Exit 4 (I-95 Southbound). On Route 37 westbound, the distance between the on-ramp from I-95 Southbound to the off-ramp for Pontiac Ave Northbound is only approximately 800 feet. In this 800-foot section, Route 37 Westbound consists



of two lanes plus a merging lane. Bridge No. 062901 (Route 37 Westbound over Pawtuxet River) which will be reconstructed as part of this project, is included within this short section of Route 37.

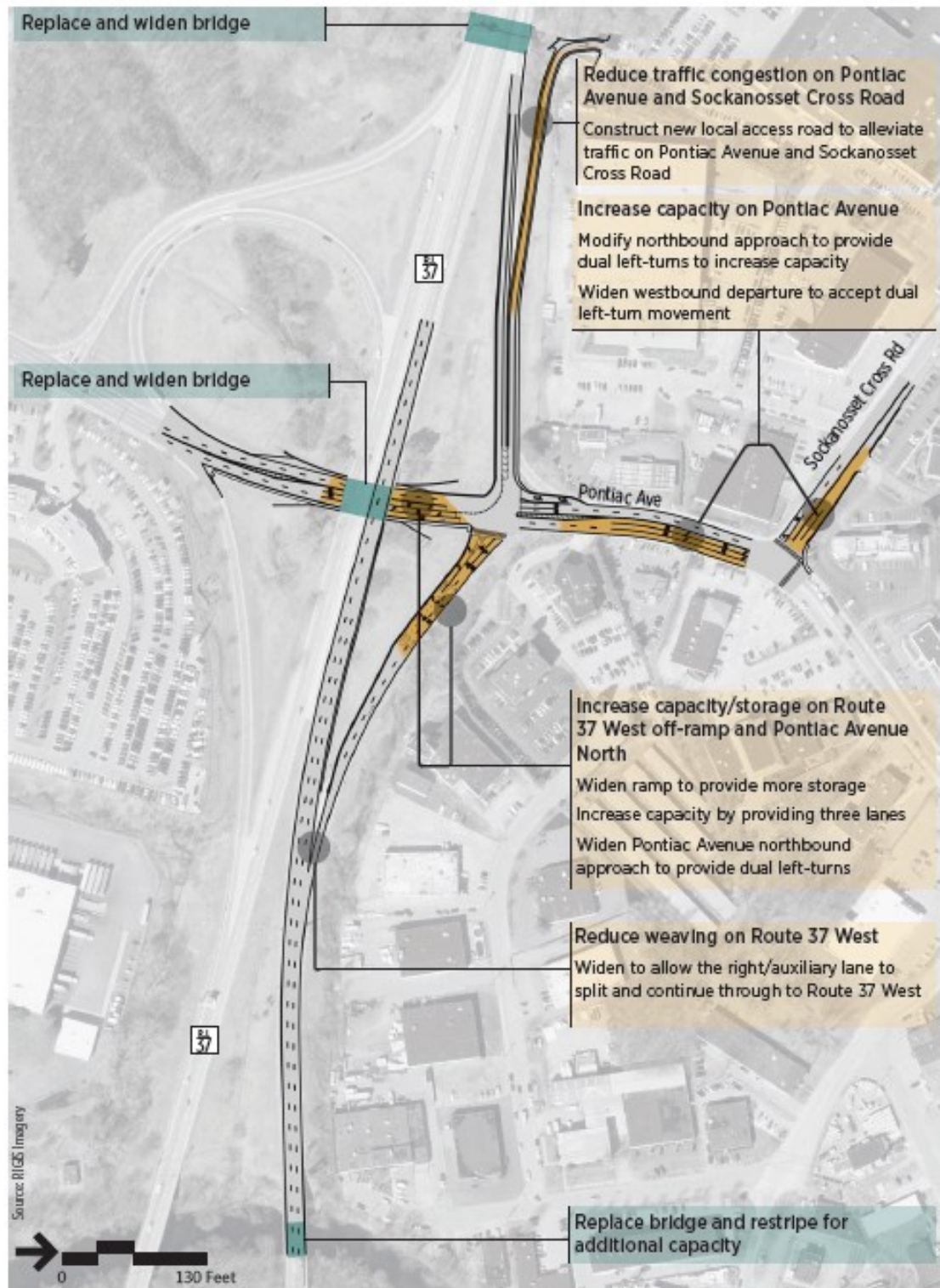
The area surrounding Exit 3 is a dense, residential and growing commercial district as noted above. The off-ramp at this exit from Route 37 westbound to Pontiac Avenue northbound services approximately 13,000 vehicles per day, and approximately 1,015 vehicles per hour at peak travel times. Because of the large volume of traffic using this single-lane off-ramp, traffic regularly backs up onto Route 37 westbound, onto the adjacent off-ramp from I-95 southbound, and from there onto I-95 southbound itself. These cascading backups create unsafe travel condi-

tions on both Route 37 westbound and I-95 southbound. Annual crash rate for this ramp location area is over 28.

A second modification will be made to remove the **weaving maneuver between I-95 south on-ramp and Route 37 westbound Exit 3 to Pontiac Avenue**. As it exists today, traffic from I-95 south entering Route 37 must merge in less than 800 feet if vehicles wish to continue on Route 37 and not take the Pontiac Avenue exit. Typical distances between on and off ramps should be between 1,600 and 2,000 feet. This short weaving distance results in congestion and queued vehicles along Route 37 and the on-ramp from I-95 south. This queue often extends to the Interstate 95 south mainline causing additional congestion and safety concerns.

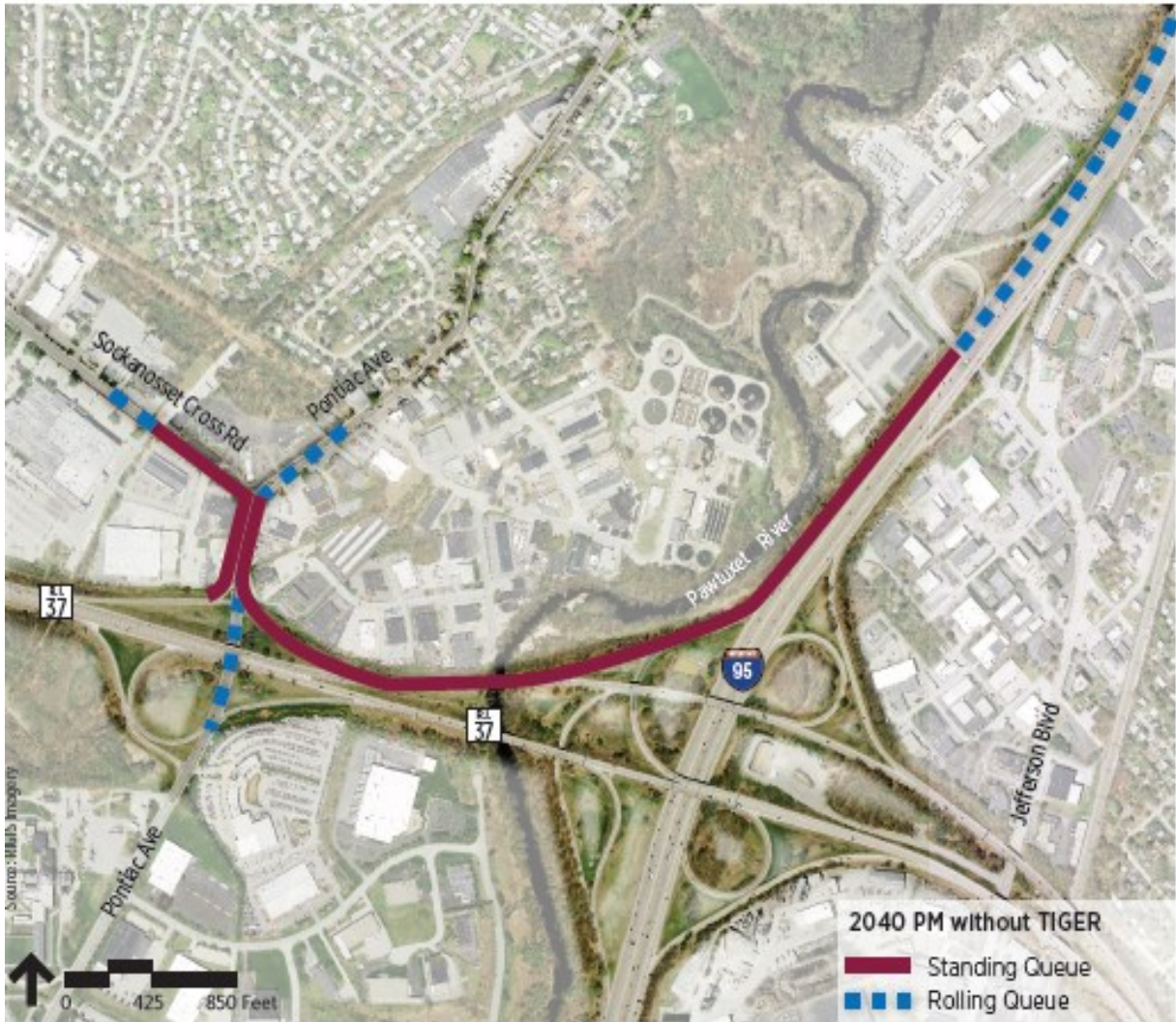
Other safety improvements will be undertaken on Pontiac Avenue include the addition of dual left turn lanes at the intersection of Pontiac Avenue and Sockanosset Cross

Overview of Roadway Improvements



Map 4: Planned Bottleneck Improvements

Vehicle Queue Summary



Road. This will entail **restriping Pontiac Avenue intersection** along with a slight widening to allow for two left turn lanes.

Modification will be made to **widening of a portion of Pontiac Avenue** to better accommodate Exit 3 off-ramp's new dual left turn lanes as discussed above. This short portion of Pontiac Avenue passes under Route 37 Bridge No. 062701 which has a Sufficiency Rating of 32.6/100 will be replaced part of this project and is described below in Part V. a. ii.

The fifth modification is the **construction of a local access road** which begins on Pontiac Avenue directly opposite of the Exit 3 westbound off-ramp. The center lane of the widened ramp Exit 3 westbound off-ramp will enable travelers to travel directly west across Pontiac Avenue onto the new road thus providing a much needed access to the expanding Chapel View mixed-use redevelopment site. This road will provide direct access off of Route 37 to a large office building which will be redeveloped into a mixed-use facility with residential, retail, restaurants and office spaces.

As a result of these bottleneck congestion improvements, the crash frequency in this area is expected to be reduced by approximately 20 percent or over 150 crashes over the next 30 years. An additional 250 congestion related crashes could also be mitigated along Route I-95 due to the elimination of the queue.

a.ii. State of Good Repair

Built in the 1960s this free-way's twenty-four bridges are now crumbling under today's increased vehicle volumes and freight demands. Forty-five percent of these bridges are classified as being in poor condition. This project focuses specifically on fifteen bridges which are shown to the left.

Four of these bridge structures (062701, 062901, 062601, and 063501) have deteriorated to the point that it is



no longer economically feasible to continue to maintain and rehabilitate. Two of these structures (062801 and 126401) are in a state of advanced disrepair, but can be salvaged with a significant rehabilitation effort. The remaining nine structures are in various states of disrepair and can have their service lives extended by way of a preservation-type rehabilitation program. Details on the conditions for these bridges are presented below. Enlargements of these photos and bridge inspection reports may be found at the project website located at: <http://route37tiger.com>.

1. Bridge No. 062701 (Route 37 over Pontiac Ave) – **\$8,110,225** for Replacement

Bridge No. 062701, built in 1964, carries Route 37 Eastbound and Westbound over Pontiac Ave in Cranston. The bridge is a three-span structure with a total length of 117'-4" and a width of 94'-0". The superstructure of this bridge is constructed with simply-supported steel beams and a reinforced concrete deck. Concrete stub abutments and multi-column piers support the superstructure.

The bridge has a deck condition rating of 4/9 (poor), a superstructure condition rating of 3/9 (serious), and a substructure condition rating of 4/9 (poor). Because of its



condition, the bridge has been classified as structurally Deficient. The bridge has been given a Sufficiency Rating of 32.6/100. The cost estimate to replace is **\$8,110,225**, and TIGER grant funding will be used to cover 80% of the cost to replace this bridge.

The concrete deck and concrete piers exhibit advanced deterioration. The deterioration has advanced to the point where an emergency contract was issued to perform temporary deck repairs and install temporary timber shoring at one pier to maintain service on the bridge until it can be replaced. Photos of the deck repairs and temporary timber shoring can be seen above

2. Bridge No. 062901 (Route 37 Westbound over Pawtuxet River) – \$6,537,642 for Replacement

Bridge No. 062901, built in 1963, carries Route 37 Westbound over the Pawtuxet River in Cranston and Warwick. The bridge is a three-span structure with a total length of 208'-0" and a width of 45'-0". The superstructure of this bridge is constructed with simply-supported steel plate girders and a reinforced concrete deck. Concrete stub abutments and concrete hammerhead piers support the superstructure.

The bridge has a **deck condition rating of 3/9 (serious)**, a superstructure condition rating of 5/9 (fair), and a substructure condition rating of 5/9 (fair). Because of its condition, the bridge has been classified as Structurally Deficient. The bridge has been given a Sufficiency Rating of 49.0/100.

The concrete deck exhibits extensive spalling. The steel girders, particularly in the areas beneath the deck joints at the abutments and piers, exhibit severe corrosion, in some cases creating holes clear through the girder elements. A repair contract was recently completed to perform repairs at the steel girder ends in order to allow the bridge to remain in service until it can be replaced. The piers exhibit spalling and a significant amount of hollow-sounding concrete. The cost estimate to replace this bridge is \$6,537,642 and TIGER grant funding will be used to cover 80% of the cost.

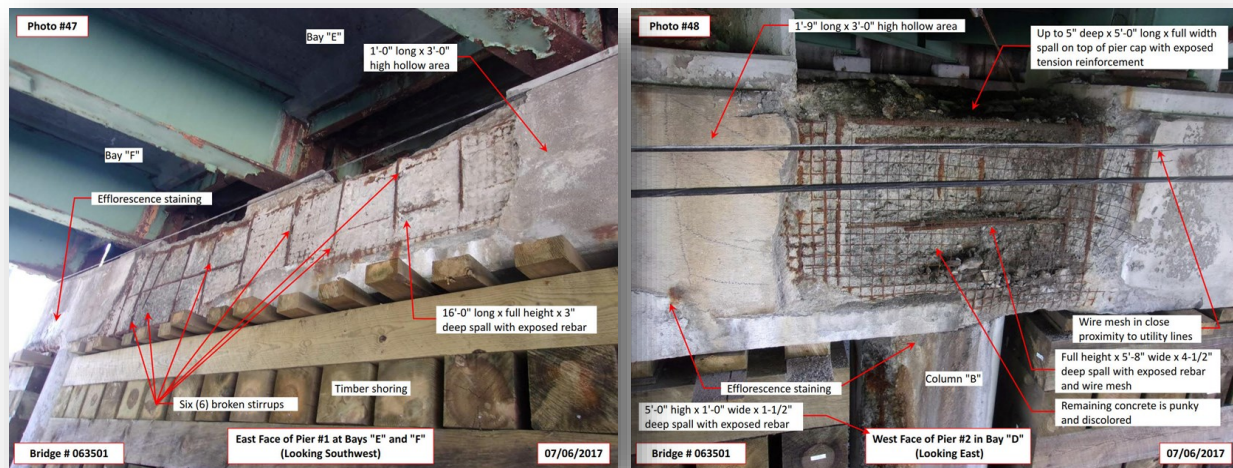


3. Bridge No. 063501 (Route 37 Westbound over Jefferson Blvd) – **\$3,841,921** for Replacement

Bridge No. 063501, built in 1966, carries Route 37 Westbound over Jefferson Boulevard in Warwick. The bridge is a three-span structure with a total length of 134'-10" and a width of 55'-2". The superstructure of this bridge is constructed with simply-supported steel beams and a reinforced concrete deck. Concrete stub abutments and multi-column piers support the superstructure.

The bridge has a deck condition rating of 4/9 (poor), a superstructure condition rating of 5/9 (fair), and a **substructure condition rating of 3/9 (serious)**. Because of its condition, the bridge has been classified as Structurally Deficient. The bridge has been given a Sufficiency Rating of 26.0/100. The cost estimate to replace this bridge is **\$3,841,921**, and TIGER grant funding will be used to cover 80% of the cost.

The concrete piers exhibit advanced deterioration, caused primarily by leakage from the overhead deck joints. The deterioration has advanced to the point where an emergency contract was issued to install temporary timber shoring to support the pier caps in order to maintain service on the bridge until it can be replaced. The piers and temporary shoring can be seen in the photos below.



4. Bridge No. 062601 (Route 37 over Pontiac Branch Railroad) – **\$2,157,422** Replacement

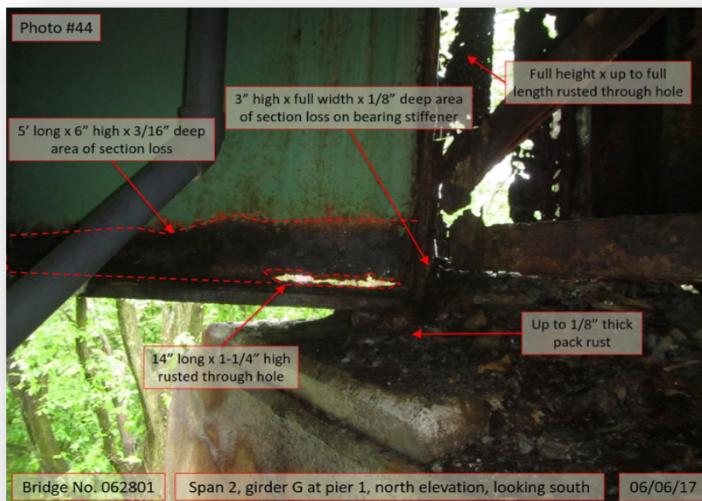
The Pontiac Branch Railroad Bridge carries Route 37 over the abandoned Pontiac Branch RR access road located near Exit 3 on Route 37 eastbound and behind the Citizen's Bank Corporate Office Building at 100 Sockanosset Cross Road in Cranston, Rhode Island. The bridge is a single span frame bridge with approximate length of 26 feet, width of 115 feet, and 10° skew. It has a cast-in-place concrete deck with concrete abutments and wing walls originally built in 1965 and recon-

structed in 1989. There is a bituminous pavement wearing surface over the bridge deck. The total bridge deck area is approximately 3,000 square feet. The bridge is in Fair condition having a sufficiency rating of 96.2%. The cost estimate for the replacement of this bridge is **\$2,157,422**. TIGER grant funding will be used to cover 80% of the cost.

5. Bridge No. 062801
(Route 37 Eastbound over
Pawtuxet River)
– \$6,043,370 for Major Rehabilitation



Bridge No. 062801, built in 1963, carries Route 37 Eastbound over the Pawtuxet River in Cranston and Warwick. The



bridge is a three-span structure with a total length of 259'-10" and a width of 45'-0". The superstructure of this bridge is constructed with simply-supported steel plate girders and a reinforced concrete deck. Concrete stub abutments and concrete hammer-head piers support the superstructure.

The bridge has a deck condition rating of 3/9 (serious), a superstructure condition rating of

4/9 (poor), and a substructure condition rating of 5/9 (fair). Because of its condition, the bridge has been classified as Structurally Deficient. The bridge has been given a Sufficiency Rating of 22.7/100. The cost estimate for the rehabilitation of this bridge is **\$6,043,370** and TIGER grant funding will cover 80% of this cost.

The concrete deck exhibits extensive spalling. The steel girders, particularly in the areas beneath the deck joints at the abutments and piers, exhibit severe corrosion, in some cases creating holes clear through the girder elements. The abutments and piers themselves, though exhibiting some deterioration, have the potential to be salvaged with a

rehabilitation effort. Examples of this deterioration in the deck and girders can be seen in the above photo.

6. Bridge No. 126401 (Route 37 and Ramp B over Unnamed Brook) – \$379,596 for Major Rehabilitation

Bridge No. 126401, built in 1964, carries Route 37 and Ramp B of the Pontiac Avenue interchange over an unnamed brook in Cranston. This structure is a 5'×8' reinforced concrete box culvert with a length of 306'.

The bridge has a culvert condition rating of 4/9 (poor). The bridge has been given a Sufficiency Rating of 43.0/100. The cost estimate for the rehabilitation of this culvert is \$379,596 and TIGER grant funding will cover 80% of this cost.

This structure exhibits significant cracking in the top and bottom slabs in the area beneath Route 37. In addition, there is an accumulation of sediment throughout the culvert, with a depth of up to 1'-4" (25% of the hydraulic opening). Photos of the cracking in the slabs can be seen below.



7. Bridges In Need of Preservation Repairs - \$13,050,832

Bridge No. 063001 (Route 37 Eastbound over I-95 Ramp A) – Preservation

Bridge No. 063101 (Route 37 Westbound over I-95 Ramp B) – Preservation

Bridge No. 063201 (Route 37 Eastbound over I-95) – Preservation

Bridge No. 063301 (Route 37 Westbound over I-95) – Preservation

Bridge No. 063401 (Route 37 Eastbound over Jefferson Boulevard) – Preservation

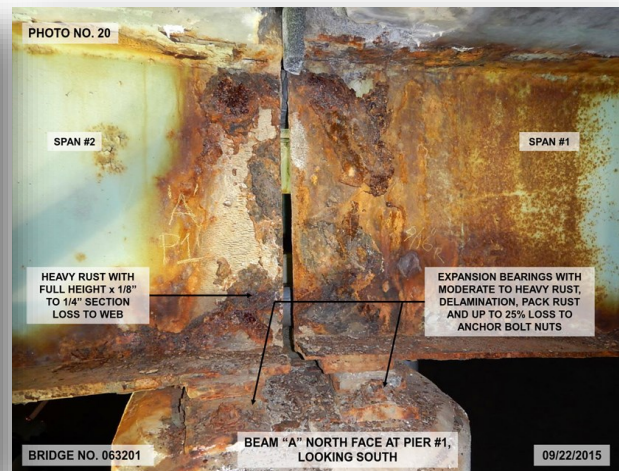
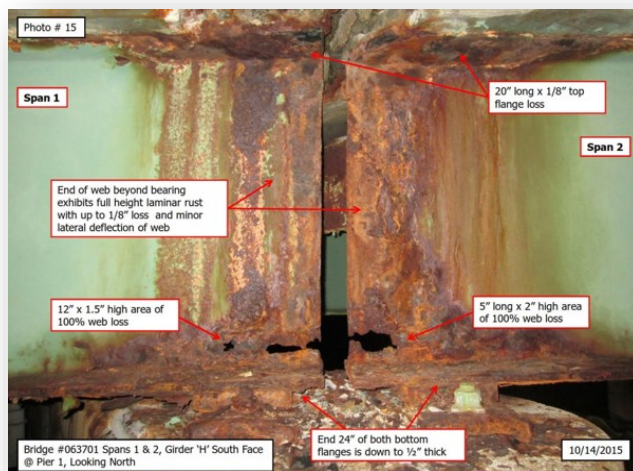
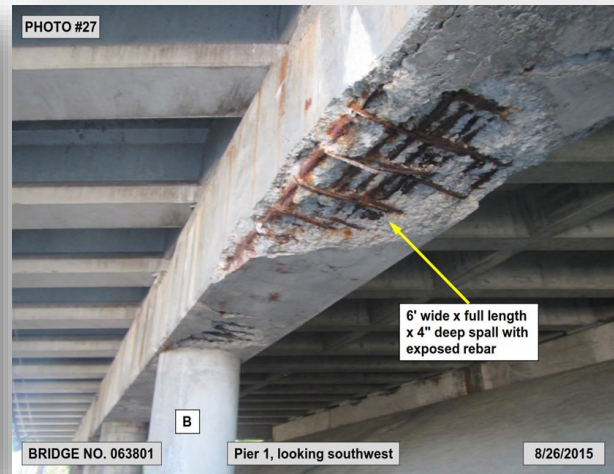
Bridge No. 063601 (Route 37 Eastbound over AMTRAK) – Preservation

Bridge No. 063701 (Route 37 Westbound over AMTRAK) – Preservation

Bridge No. 063801 (Route 37 over US-1 Post Road) – Preservation

Bridge No. 126301 (Pontiac Ave over Unnamed Brook) – Preservation

Steel beams and girders for these bridges typically heavily corroded at the beam ends with varying amounts of loss of steel section. Deck joint failures, bearing corrosion, and barrier damage are also common elements with these bridges. Repairs are needed to correct these deficiencies and extend the service lives of these bridges. The cost estimate for preservation work on these bridges is **\$13,050,832** and TIGER grant funding will help to pay for 26% of this cost. Some photos of typical deficiencies are shown below.

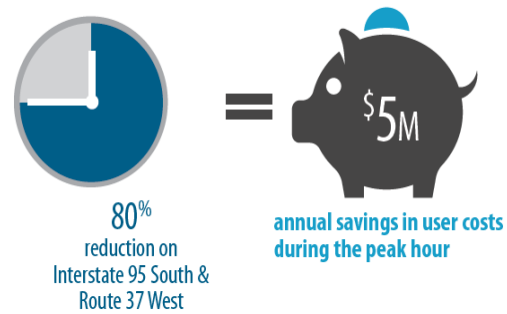


a.iii. Economic Competitiveness

Improvement in Reliability

There are a number of elements to this project which will directly improve the efficiency of Route 37 and thus reduce the commute time to get to work, as well as the travel time required to move goods through the heart of Rhode Island. The roadway improvements discussed in Part V. a.1., (ramp widening, dual left turns, frontage road, the weaving modification and new local access road), are all expected to result in an 80% reduction travel time savings on Route 37 westbound as well as I-95 southbound. If no improvements are made, the existing bottleneck (Route 37 weave and Pontiac Ave operations) would cause the queue to extend 2.0 miles along I-95 South (almost to Route 10) and it would take approximately 15 minutes to get onto Route 37.

Travel Time Savings if Improvements are Made



Crash Reduction Cost Savings

With the reduction of congestion from these proposed improvements, Route 37 westbound, Exit 3 ramps and Pontiac Avenue intersections are expected to reduce crashes frequency in this area by approximately 20% percent over the next 30 years targeting mostly rear-end collisions. These anticipated crash reduction will translate to cost savings to the traveling public, including savings to commercial operators who are delivering goods to this growing commercial center of Rhode Island. The estimated economic and societal costs associated with the vehicle crashes is approximately \$500,000 annually. With the projected reduction in crashes, up to \$100,000 in economic and societal costs could be saved annually. Supporting calculations and source materials are posed on the project [website](#).

Current Annual Crash Costs

\$500 thousand in annual crash costs



If Improvements are made...



in annual crash cost savings

Protects the Economic Viability of Central Rhode Island

Fiscal and economic impacts associated with the project are summarized in the following section.

Labor/Wages This project is anticipated to result in substantial direct and indirect impacts to the local and regional economy of Rhode Island. Over the four years of project

initiation and construction, there is a projected increase of more than \$20 million in direct and indirect wage benefits to the Rhode Island economy. This is a result of the wages paid to construction workers and those directly involved with the project itself, as well as the spin-off indirect wages that result from money coming into the local economy and being spent across the state. This is projected to result in an **additional 580 full-time equivalent jobs and \$26.10 million in new wages** over the course of the project's four-year time horizon.

Income Tax Receipts – The additional direct and indirect wages are projected to result in an additional \$766,422 in state income tax receipts.

New Economic Output – The combined projected wage output and the construction spending output is projected to add an additional \$69.8 million in net new economic output into the Rhode Island economy from the construction of the TIGER grant project. The following table shows the annual economic impacts associated with the project. The project [website](#) provides details, assumptions and inputs used to conduct the Economic Impact Analysis which was prepared by RKG Associates, Inc.

Scenario A		ESTIMATED ANNUAL PHASING and IMPACTS				
TIGER Grant Funding		2018	2019	2020	2021	TOTAL
Costs (constant \$)						
Materials		\$3,354,000	\$6,966,000	\$5,564,200	\$3,035,800	\$18,920,000
Labor		\$2,886,000	\$5,994,000	\$4,787,800	\$2,612,200	\$16,280,000
Mobilization		\$624,000	\$1,296,000	\$1,035,200	\$564,800	\$3,520,000
Contingencies		\$936,000	\$1,944,000	\$1,552,800	\$847,200	\$5,280,000
TOTAL		\$7,800,000	\$16,200,000	\$12,940,000	\$7,060,000	\$44,000,000
Wage Impacts						
	Direct 1/	\$2,886,000	\$5,994,000	\$4,787,800	\$2,612,200	\$16,280,000
	Indirect 2/	\$1,741,124	\$3,616,180	\$2,888,480	\$1,575,940	\$9,821,724
Employment Impacts						
	Direct 3/	56	116	92	50	314
	Indirect 4/	47	98	78	43	266
NEW Economic Output						
	Wages 5/	\$4,627,124	\$9,610,180	\$7,676,280	\$4,188,140	\$26,101,724
	Employment 5/	103	214	171	93	580
	Construction 6/	\$7,742,990	\$16,081,594	\$12,845,422	\$7,008,398	\$43,678,404
	TOTAL	\$12,370,114	\$25,691,774	\$20,521,701	\$11,196,539	\$69,780,128
Estimated State Income Tax Receipts 7/						
	Direct	\$108,225	\$224,775	\$179,543	\$97,958	\$610,500
	Indirect	\$65,292	\$135,607	\$108,318	\$59,098	\$368,315
	Total	\$173,517	\$360,382	\$287,860	\$157,055	\$978,815
Sources : VHB, RKG Associates, Inc., RI Dept. of Labor, US Dept. of Commerce (RIMS II)						
1/ Labor Costs = Direct Wages						
2/ Direct Wages X Indirect Wage Multiplier (1.6033-1) = Indirect Wages						
3/ Direct Wages ÷ Average Annual Wage (\$51,780) = Direct Employment						
4/ Direct Employment X Indirect Employment Multiplier (1.8447-1) = Indirect Employment						
5/ Direct + Indirect = Total						
6/ Costs of Materials, Mobilization, Contingency X Final Demand Multiplier (1.5757) = New Economic Output						
7/ Assumes worker filing as a single person, taxed at marginal rate of 3.75%						

Estimated Annual Phasing and Economic Impacts, page 10, Economic Impact Analysis

Economic Impacts of the Development Pipeline Projects

In addition to the economic impacts associated with this project, several parcels just to the west and northwest of the impact area are being considered for redevelopment. The potential **economic benefits** from the redevelopment of these parcels which could be made more likely if the congestion, safety, and access is improved through the proposed TIGER grant project, include:

- **463 additional permanent professional and service sector/retail jobs**
- **\$123,176 in added income tax receipts from those jobs.**
- **\$1.3 million dollars additional property taxes**

The Economic Impact Analysis report which can be found at the project [website](#) provides details on these impacts.

a.iv. Environmental Sustainability

With the improved traffic flow resulting from the Route 37, Exit 3 off-ramp expansion and related intersection improvement to Pontiac Avenue this project is expected to decrease congestion beginning at the on-ramp from I-95 Southbound to the off-ramp for Pontiac Ave Northbound during peak traffic hours. The reduced vehicle delays as a result of this project are expected to result in emissions reductions and air quality improvements. Daily Vehicle Hours Traveled in the traffic network is expected to decrease from 2,460 vehicle hours in the No Build Condition to 1,210 vehicle hours in the Build Condition, while the average speed is expected to increase from 16.5 mph to 40.0 mph. This results in a decrease of pollutants across the project area. **CO2 is expected to decrease by 1,684 tons per year**, NOX will decrease by 0.3 tons per year, VOC decrease by 0.3 tons per year, PM10 will decrease by 1.2 tons per year, and PM2.5 will decrease by 0.2 tons per year. The project [website](#) provides details, assumptions and inputs used in these calculations.

a.v. Quality of Life

This project will not only fix crumbling bridges, it will also stop the queuing of cars along the Route 37 corridor. This project will enhance access to the growing employment centers and local commercial activities along Route 37. Between 2009 and 2016 private sector employers in Cranston reported a gain of 3,796 (+ 14.2%) jobs compared to a 5.6% increase statewide total employment growth rate.² This growth rate can be expected to continue due to the expansion plans for both Chapel View and Garden City Center as noted earlier.

Fixing the bridges and reducing congestion will enable continued growth in the interstate commerce that relies on this east-west corridor to access. Route 37 is a vital con-

²State of the State: A Statistical Profile of Rhode Island's Cities and Towns, RI Department of Labor and Training.

nection between T. F. Green Airport's catchment area which extends north to Massachusetts and connects these travelers to the airport via channeling travelers to I-295 and I-95 south. T.F. Green Airport, the third largest airport in New England, is also experiencing growth due to a runway expansion project completed earlier this year.

b. Secondary Criteria

b.i. Innovations

Asset Management Innovation

The Route 37 Corridor Safety Sweep Project will be incorporated into RIDOT's new Transportation Asset Management (TAM) program. Beginning at the time of construction, shop drawings, items with warranties, will be added to the TAM Program to enable the optimization of the structure over the long-term cost structure.

Asset management helps assess and forecast the deterioration of assets, 'maintain transportation systems to a state of good repair and address current and projected vulnerabilities,' as stated in the TIGER NOFO. As such, this "project is appropriately capitalized up front and uses asset management approaches that optimize its long-term cost structure;" and we pledge that "a sustainable source of revenue is available for operations and maintenance of the project and the project will reduce overall life-cycle costs" and keep it in a state of good repair.

Preventative maintenance is critical in keeping our roads and bridges in good condition and extending their service life. This involves developing a comprehensive infrastructure inventory, tracking each piece to assure it is properly maintained, reducing the need for costly rehabilitation and reconstruction projects – plans which are now in place at RIDOT.

Construction Phasing Innovation

While the Route 37 Bridge Reconstruction Project is underway, it is vitally important to ensure that this freeway remains open for business. The project will include innovative phasing schemes to minimize lane and ramp closures during construction.

The construction phasing and traffic conditions will be monitored via RIDOT's Transportation Management Center (TMC), the state's hub of Intelligent Transportation Systems (ITS) and communication resources. Under the TMC Rhodeways program, roadside cameras help identify incidents on the highways and variable message signs provide real-time drive-time information to motorists. As part of the project, all construction phasing will be monitored at the TMC. A fiber-optic communications backbone will be installed as part of the project to complete the vital communication link between the TMC and the project location.

Innovative Construction Methods

RIDOT will evaluate the feasibility for employing Accelerated Bridge Construction (ABC) methods for the bridges in this project. Typical ABC techniques may include

utilizing prefabricated bridge units (PBUs) for accelerated superstructure replacement or off-line parallel bridge construction and then sliding new bridge into place. Both will involve limited weekend closures to limit long term traffic impacts. The weekend closure would allow for a portion of the bridge to be demolished and then re-built in place. Also, where appropriate, traffic cross-overs into the existing medians may be utilized to limit disruption of traffic flow while bridges are being replaced. The Department will also consider the option of changing some of the multi-span bridges to single span bridges. This design change will allow for additional widening of the roadway below the bridges where applicable.

b.ii. Partnership

RIDOT has met and discussed this project with numerous stakeholders in the Cranston/Warwick area. The project has received letter of support from the following stakeholders, including the Speaker of the RI House of Representatives, the President of the Rhode Island Senate, the Mayors of Warwick and Cranston, Rhode Island Department of Administration Planning Division, Rhode Island Public Transit Authority, AAA Northeast, T.F. Green Airport, Providence Warwick Convention & Visitors Bureau and Carpionato Group LLC. RIDOT has obtained the commitment from a private redevelopment firm, [Carpionato Group](#) of Johnston Rhode Island, to invest \$2 million towards the new access road which will allow for direct access to the Chapel View mixed-use redevelopment site. These changes will alleviate traffic congestion which has been a problem since the developer began offering retail and restaurant choices in



Carpionato Group's Proposed Mixed-use Redevelopment Project along side Route 37.

and around that location at 100 Sockanosset Cross Road in Cranston. Carpionato Group is a real-estate service provider that includes leasing and acquisitions, brokerage and tenant representation with a portfolio of commercial, residential and mixed-use property developments that include the Chapel View mix-use complex in Cranston.

VI. Project Readiness

a. Technical Feasibility

Preliminary engineering has begun. The final design is anticipated to be completed by fall of 2018. The design is being developed in coordination with environmental and National Environmental Policy Act (NEPA) permitting for the project. RIDOT expects that all components of the project will be evaluated using categorical exclusions.

b. Project Schedule

This project is already listed on the TIP and state matching funds have been allocated to accompany the TIGER funds. The project is anticipated to begin October 1, 2019 and be completed by October 1, 2021 as show in the table to the right

	2018	2019	2020	2021
Route 37 Corridor Safety Sweep Project				
Anticipated Project Schedule				
Preliminary Engineering, (including NEPA and other necessary approvals)	◇			
Pre-construction Engineering, Late 2018	◇			
Authorization of Funding, October 1, 2018	◇			
Contract Advertisement, November 15, 2018	◇			
Construction Contract Award, January 1, 2019		◇		
Construction Notice to Proceed, May 1, 2019		◇		
Construction Phase		◇		◇
Construction Completion, October 1, 2021				◇

c. Required Environmental Reviews and Approvals

RIDOT anticipates the completion of the NEPA process by October 1, 2018 and will obtain any other necessary permits and approvals, as well as complete all additional pre-construction steps. Only minor land acquisition is anticipated during this project in order to accommodate the widening of Pontiac Avenue northbound for the additional left turn lane on to Sockanosset Cross Road Crossroad.

Categorical Exclusion – RIDOT anticipates that the project will meet the requirements of Categorical Exclusion (CE) in accordance with 23 CFR 771.117 and the RIDOT/FHWA CE Agreement procedures.

State and Local Approvals

The responsibility for reconstruction of the bridges located on Route 37 is under the jurisdiction of RIDOT. RIDOT has included these bridges in the current Statewide TIP. This comprehensive improvement plan lists each project that RIDOT plans to award, including numerous bridge repairs, rehabilitations, and replacements. These bridges are listed in the current 2017-2020 TIP.

The TIP lists more than \$2.2 billion in transportation projects that the State of Rhode Island intends to implement using State, Federal Highway Administration (FHWA), and Federal Transit Administration (FTA) funding. The TIP is prepared by Statewide Planning and covers the period from October 1, 2017, to September 30, 2020, coinciding with federal fiscal years 2017 through 2020. The TIP is prepared through the efforts of the State Planning Council's Transportation Advisory Committee (TAC) and staff from the Statewide Planning Program, Department of Transportation, and the Rhode Island Public Transit Authority.

Legislative Approvals/Stakeholder Support

Specific legislative approval is not required to advance this project. Support for the project is demonstrated by the Letters of Support from key stakeholders in support of this project including the cities of Cranston and Warwick, are presented as an attachment and can be found at <http://route37tiger.com>.

d. Financial Feasibility

The project is already listed on the Rhode Island TIP. State matching funding has been allocated to accompany the TIGER funds.

RIDOT has been successfully managing FHWA grants for decades. RIDOT has implemented an automated grant management system to effectively manage the federal grant program to ensure accuracy in financial transactions. Evidence of this effectiveness is the receipt of an unqualified opinion on the recent 2012 financial audit.

The state utilizes a special fund known as the Intermodal Surface Transportation Fund (ISTF) for all State Highway projects, along with maintenance and operations. State gas tax funds, Rhode Island Capital Plan (RICAP) funds, and an increase in license and registration fees provide reliable sources of funds for the ISTF.

RIDOT is requesting \$25 million from the TIGER Discretionary Grant funding program and is committing \$17.1 million from its TIP to complete the project.

The \$25 million TIGER grant funding will free up other funds that have already been budgeted in the 10-Year-Plan, thereby enabling RIDOT to accelerate the reconstruction and/or rehabilitation of the remaining eleven bridge structures located in the western portion of the Route 37 corridor which are also in dire need of repair. In addition, it will enable RIDOT to make necessary safety and congestion improvements at the same time the bridge work is undertaken.

e. Assessment of Project Risks and Mitigation Strategies

RIDOT has just undergone its largest ever reorganization, instituting a new Project Management approach to provide greater accountability – ensuring projects are built on time, on budget and to specification. The agency has adopted unprecedented accountability and transparency measures, and reorganized staff for maximum efficiency and effectiveness to efficiently manage and deliver transportation projects on time, on budget and with the highest quality. Project managers at RIDOT closely monitor schedules, coordinate permits and regulatory requirements, and ensure that projects are completed on time, on budget and at the highest quality.

Numerous risk mitigation strategies will be applied during this project including, but not limited to:

- ◇ Accelerated Bridge Construction techniques will be considered for minimize the amount of time taken to replace the major bridge structures, and weekend and night construction will be required to minimize travel delays.
- ◇ Traffic conditions will be monitored via RIDOT's Transportation Management Center (TMC) the State's hub of Intelligent Transportation System (ITS) and communication resources including the deployment of drive-time alert messaging boards.
- ◇ Erosion control and pre/post construction surveys will be employed throughout the project.
- ◇ RIDOT will evaluate the affect on fish runs for the Pawtuxet River.
- ◇ Stormwater treatments will be applied to 100% of all of the new impervious areas constructed during this project.

RIDOT has been commended by FHWA for the quality of reporting and documentation on the 2012 TIGER Grant for Viaduct Southbound and the 2013 TIGER Grant for Apponaug Circulator Long-term Improvements Project. FHWA's Rhode Island Division Office conducted an on-site assessment of the Southbound Viaduct Project to review the 2012 TIGER grant administration and oversight. During the review, RIDOT's financial staff explained their innovative Construction Management System (CMS) which allows RIDOT to uniquely assign staffing. After the interviews, FHWA's assessment report praised RIDOT for their record keeping and construction oversight.

VII. Benefit Cost Analysis

Benefit-Cost Analysis Summary

A Benefit-Cost Analysis (BCA) was prepared for this project by Vanasse Hangen Brustlin, Inc. (VHB.) The analysis provides estimates of the anticipated benefits that are expected to accrue from this bridge project over a 30-year period (2019 to 2048), the BCA factors include:

Project costs including construction costs, estimated annual operating/maintenance, work zone impact costs. User costs attributable to traffic delay, vehicle operating costs, safety, and air quality.

Benefits were quantified in terms of, operations and maintenance savings, crash reductions, emissions benefits, traffic delay. The resulting BCA findings are:

- **The Net Present Value (NPV) of benefits is \$62.8 million**
- **The project's Benefit-to-Cost ratio is 2.61**
- **The Return on investment (ROI) is 10 percent**
- **The Total Project Benefit Over the 30 year Period is \$97.9 million**
- **Average User-Cost Savings (\$3.77) million**

The [website](#) for the project provides the detailed backup Benefit Cost Analysis files and spreadsheets which explain the methodologies used for calculating the costs and benefits.

Project Annual Benefits



Crash reductions = \$100 thousand
Peak hour travel time benefits = \$5 million
Emissions = \$95 thousand



Favorable
benefit-to-cost ratio
2.6



Net present value
of benefits
\$62 million

VIII. Cost Share

The TIGER Grant funding requested for this project will be directed towards the replacement and/or rehabilitation of following bridges located along the Route 37. If RIDOT is able to secure TIGER funding, it will free up other funds that have already been budgeted in the 10-Year-Plan, thereby enabling RIDOT to pay for other bridges located further western on the Route 37 corridor which are also in dire need of repair. It will also enable RIDOT to advance important roadway safety improvements at the same time the bridge work is undertaken, and increase the safety and well-being of our traveling public along this vital west-east corridor through the heart of Rhode Island. In order to maximize the non-federal share of this project's funding,

Bridge No.	Project Location	Total Cost Estimate	Percent requested in TIGER Funding	Amount requested in TIGER Funding
No. 063501	Jefferson Blvd North Bridge at RI 37 WB	\$ 3,841,921.00	80%	\$ 3,073,536.80
No. 062701	Pontiac Ave Bridge, RI 37 EB &WB at Pontiac Ave	\$ 8,110,225.00	80%	\$ 6,488,180.00
No. 062901	Pawtuxet River North Bridge at RI 37 WB and Pawtuxet River	\$ 6,537,642.00	80%	\$ 5,230,113.60
No. 062601	Route 37 over Pontiac Branch Railroad	\$ 2,157,422.00	80%	\$ 1,725,937.60
No. 062801	Route 37 Eastbound over Pawtuxet River	\$ 6,043,370.00	80%	\$ 4,834,696.00
No. 126401	Route 37 and Ramp B over Unnamed Brook	\$ 379,596.00	80%	\$ 303,676.80
Bridges In Need of Preservation Repairs	Nine locations	\$ 13,050,832.00	26%	\$ 3,343,859.20
Highway Safety Improvements	Five separate locations	\$ 3,940,000.00	0%	\$ -
		\$ 44,061,008.00		\$ 25,000,000.00

RIDOT has obtained the commitment from Carpionato Group LLC, a private redevelopment firm, to provide \$2.0 million towards the construction of the new access road along Route 37 which will alleviate a traffic bottleneck on Pontiac Avenue at the Exit 3 on and off-ramp area. They will also pay for final design expenses related to these roadway improvements.

VIII. Federal Wage Rate Certification

RIDOT certifies that it will comply with the requirements of Subchapter IV of Chapter 31 of Title 40, United States Code (Federal wage rate requirements), as required by the Consolidated Appropriations Act, FY 2017.



Department of Transportation
Two Capitol Hill
Providence, RI 02903

Office 401-222-2450
Fax 401-222-3905
www.dot.ri.gov

**FY 2017 TIGER Discretionary Grant Application
Route 37 Bridge Reconstruction Project**

FEDERAL WAGE RATE CERTIFICATION

The undersigned agrees to comply with the requirements of Subchapter IV of Chapter 31 of title 40, United States Code regarding Federal wage rate requirements, as required by the Consolidated Appropriations Act, 2017.

A handwritten signature in black ink, appearing to read "Peter Alviti, Jr.", written over a horizontal line.

Peter Alviti, Jr.,
Director, Rhode Island Department of Transportation
September 7, 2017